



Rehabilitation Engineering Research Center for
Wireless Technologies

VIA ECFS

November 29, 2006

Marlene H. Dortch, Secretary
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
TW-A325
Washington D.C. 20554

Re: *Petition for Rulemaking: Cyren Call Communications
Corporation – Reallocation of 30 MHz of 700 MHz
Spectrum from Commercial Use – Assignment of 30 MHz
of 700 MHz Spectrum to the Public Safety Broadband
Trust for Deployment of a Shared Public
Safety/Commercial Next Generation Wireless Network*

Dear Ms. Dortch:

Enclosed for filing in the above referenced petition for rulemaking, are comments of the Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC).

Should you have any questions concerning this filing, please do not hesitate to contact me via phone (404-385-4640) or e-mail (helena.mitchell@cacp.gatech.edu).

Respectfully submitted,

Helena Mitchell
Principal Investigator
Rehabilitation Engineering Research Center for Wireless Technologies
(Wireless RERC)
Executive Director

Center for Advanced Communications Policy
Georgia Institute of Technology

Enclosure

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Reallocation of 30 MHz of 700 MHz)	Proceeding RM - 11348
Spectrum (747-762/777-792 MHz))	
From Commercial Use)	
)	
Assignment of 30 MHz of 700 MHz)	
Spectrum (747-762/777-792 MHz))	
To the Public Safety Broadband Trust for)	
Deployment of a Shared)	
Public Safety/Commercial)	
Next Generation Wireless Network)	

**COMMENTS OF
REHABILITATION ENGINEERING RESEARCH CENTER FOR
WIRELESS TECHNOLOGIES (WIRELESS RERC)**

The Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC), hereby submits comments to the Petition For Rulemaking submitted by Cyren Call Communications Corporation (“Cyren Call”) on April 27, 2006.

The Wireless RERC¹ is a research center focused on promoting equitable access to and use of wireless technologies by people with disabilities

¹ The Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC) is sponsored by the National Institute on Disability and Rehabilitation Research (NIDRR) of the U.S. Department of Education under grant number H133E060061. The opinions contained in this paper are those of the authors and do not necessarily reflect those of the U.S. Department of Education or NIDRR.

and on encouraging the application of Universal Design practices in future generations of wireless technologies.

The Wireless RERC has reviewed the Cyren Call petition and supports the portion of its proposal regarding the allocation of additional spectrum for shared use in a public/private partnership serving primary public safety communications needs, and compatible or associated commercial services. Cyren Call proposes that an additional 30 MHz of 700 MHz band spectrum be made available to public safety and emergency responders to enhance their ability to communicate reliably and effectively in emergency conditions on an interoperable network. This network would use commercial satellite and terrestrial wireless systems to deliver broadband data communications to emergency response providers of public safety services. The network comprises a comprehensive scheme to interconnect local, state and federal agencies across existing radio, and other communications networks to facilitate interoperability among these users.² While this is one approach, the Wireless RERC is concerned that more options need to be explored to ensure that the design of such a network considers the needs of people with disabilities in receiving wireless alerts.

The Wireless RERC also agrees with CTIA's response to Cyren Call's petition which states "CTIA supports the establishment of interoperability for

² Cyren Call Petition for Rulemaking at page 2 and their network operation schematic.

the Public Safety community...However, from a substantive and procedural perspective the Cyren Call proposal is the wrong vehicle to achieve this important goal.³ The Wireless RERC believes the issue of public safety is of paramount concern to public and emergency responders who must have the tools to communicate interoperably and seamlessly during emergency situations. To accomplish this goal we strongly recommend consultation with other stakeholders such as those working on the Digital Emergency Alert System (DEAS) being established by the Department of Homeland Security (DHS). The Wireless RERC further recommends that this important matter be resolved quickly and not await another manmade or natural catastrophic disaster before the FCC revisits the subject.

The Commission has indicated that an accurate, wide-reaching public alert and warning system is critical to public safety. In the FCC First Report and Order and Further Notice of Proposed Rulemaking regarding the Emergency Alert System the Commission further stated its commitment “to ensuring that people with disabilities have equal access to public warnings and are considered in emergency preparedness planning.”⁴ The Wireless RERC notes that it is a vital part of the Commission’s core mission to promote the safety of life and property through a robust communications

³ See CTIA letter to Chairman Martin, October 31, 2006 at page 1.

⁴ See Review of the Emergency Alert System, EB Docket No. 04-296, *First Report and Order and Further Notice of Proposed Rulemaking*, FCC 05-191, 20 FCC Red 18625 (2005) (“*EAS Further Notice*”), at 74.

system.⁵ We further note in a filing before the Commission, that any public alert and warning system, including delivery to wireless devices, must increase the ability of persons with disabilities to receive emergency information.⁶

Regarding interoperability and inter-jurisdictional technical issues, past research indicates that these are key emergency management concerns⁷. Currently, emergency managers and public safety personnel cope with the challenges of using a variety of technologies, such as digital two-way radio, voice and data transmissions, and mobile communications systems. Technically, responders continue to experience wireless “dead zones” for reception and degradation of signals during emergencies. A nationwide dedicated emergency network would enable national, state and local officials to communicate in an effective and efficient manner during an emergency. The deployment of digital wireless services specifically designed for emergency communication as part of a national network would have the capability to deliver next generation emergency alerts and warnings on state

⁵ Wireless RERC Comments. *First Report and Order and Further Notice of Proposed Rulemaking*, FCC 05-191, 20 FCC Rcd 18625 (2005) January 23, 2006.

⁶ *Ibid.*, 9.

⁷ In various projects undertaken between February 2002 and the present, the Center for Advanced Communications Policy (home of the Wireless RERC) has found these two themes as a recurring concern of the public safety and emergency management community. Also see Proceedings from the State of Technology Conference of the Wireless RERC, May 2004, pages 163-165.

and local levels as noted in the review of the Emergency Alert System.⁸ Specialized and geographically targeted emergency messages could thus be sent to the community of people with disabilities over multiple platforms simultaneously.

The Wireless RERC also envisions further expanding the range of broadband wireless technologically advanced applications available to people with disabilities. Several important elements should be taken into account in the development of a comprehensive *and* inclusive emergency communications network that might increase communications capacity. These elements include the design and implementation of appropriate user interfaces; a robust range of devices capable of receiving emergency communications; and the capability of wireless carriers to deliver emergency alerts and warnings via cell broadcasting and SMS messaging on digital wireless devices. The Commission should continue its due diligence by ensuring that new and evolving IP-based wireless emergency communication applications are able to serve all critical populations including people with disabilities.

The Wireless RERC agrees with Cyren Call that it is possible to implement public/private shared use of reallocated spectrum in the 700 MHz

⁸ See Review of the Emergency Alert System, EB Docket No. 04-296, *First Report and Order and Further Notice of Proposed Rulemaking*, FCC 05-191, 20 FCC Red 18625 (2005) (“*EAS Further Notice*”).

band. Public safety has a high demand for spectrum use during mission-critical conditions and underutilized spectrum might be one way to alleviate congestion if concerns with interoperability, robustness, and inter-jurisdictional issues can be resolved. The Cyren Call petition proposes that commercial operators use this excess capacity to offer new commercial services to its customers. The Wireless RERC suggests this could promote optimal spectrum efficiency of the upper 700 MHz band and provide a unique opportunity to negotiate for public safety services that commercial carriers in the U.S. have been resistant to implement. The Wireless RERC suggests that any reallocation of spectrum address the needs of people with disabilities and that future opportunities for universal design in product/services be included as part of the early planning or mandated service in exchange for commercial use of the spectrum.

The Wireless RERC recognizes that the Commission has plans to auction spectrum in the 700 MHz band, Auction No. 31⁹. Some public safety and commercial entities question the amount of additional spectrum needed in the 700 MHz band to fully satisfy the provision of broadband service for emergency communications.¹⁰ The Commission might consider reexamination and reallocation of spectrum to provide additional broadband

⁹ FCC, Report No. AUC-02-31-G (Auction No. 31), July 26, 2002.

¹⁰ See FCC, Report To Congress: On the Study to Assess Short-Term and Long-term Needs for Allocations of Additional Portions of the Electromagnetic Spectrum for Federal, State and Local Emergency Response Providers, December 19, 2005.

services for emergency communications and the reallocation of the unauctioned portion of the upper 700 MHz band to public safety. The Commission is authorized, in its annual reports to Congress, to “...make specific recommendations to Congress as to additional legislation which the Commission deems necessary or desirable....”¹¹

In closing, the Wireless RERC wishes to emphasize that any decisions made by the FCC regarding spectrum allocation for public safety take into account the concerns and accessibility requirements of people with disabilities. The Wireless RERC recommends that the Commission consult with the DHS and other government agencies before rendering a decision in this matter. It is important that any future nationwide emergency communications network be investigated to determine how it can interface with other warning networks such as the national level Digital Emergency Alert System (DEAS) being established by DHS. Such interfaces can be used to provide alerts and warnings across a group of systems ensuring that the public, public safety and government agencies, and disabled communities receive the same information.

Respectfully submitted,

Helena Mitchell, Executive Director
In consultation with
Laurel Yancey, Chief Policy Officer

¹¹ 47 U.S.C. § 154(k).

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Dated this 29th day of November 2006